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## LECTURES.

### THE DIAGNOSTIC VALUE OF THE "OVARIAN CELL."

A LECTURE DELIVERED IN THE NECROPSY THEATRE OF COOK COUNTY HOSPITAL, CHICAGO, BY PROF. I. N. DANFORTH, NOVEMBER 19, 1877.

[REPORTED BY B. W. GRIFFIN, M. D.]

THE specimens which I show you this evening are of more than ordinary interest. I will describe and exhibit them to you, and then a history of the case from which they were derived will be read. Afterwards I shall call your attention somewhat at length to this question: What is the true diagnostic value of the so-called ovarian cell? I shall discuss this now for reasons which will become apparent as we proceed.

This first specimen is an excellent example of what is generally known as a "cystic kidney." It is really a case of hydronephrosis or dropsy of the kidney, and the specimen before you is quite typical. The kidney is distended so as to form an irregular membranous sac, divided imperfectly into these compartments by the remaining septa, composed mainly of hypertrophied connective tissue. The contents of this distended kidney consisted of pale or yellowish, somewhat cloudy or turbid serum. After standing for a few hours, this fluid separated into two very sharply defined parts, namely, a dense grayish deposit, and a supernatant serous fluid, which was quite clear and slightly yellow. This dropsical kidney was mistaken for a cystic ovary, and as such was removed by operation by Dr. A. Reeves Jackson, of this city, who kindly permits me to use the specimen, and to mention his name in connection with the case.

The next specimen includes the uterus, a portion of the vagina, a part of the bladder, the broad ligament or its remains, both Fallopian tubes, and both ovaries from the same patient. These parts are in a nearly healthy condition, with the exception of the ovaries, which are both in the early stage of cystic degeneration.

Dr. D. A. K. Steele is present in behalf of Dr. Jackson, who is sick, and will read a history of the case.

[The following is a synopsis of the history read by Dr. Steele.]

"M. D., single, American woman, twenty-six years of age; menstruation regular until eight years ago. Then the menstrual flow ceased for one year (between the ages of eighteen and nineteen), after which it was reëstablished. Abdomen has been gradually enlarging during last five years. Patient complains of sensations of heat and pain in the lower part of the abdomen. Urinates frequently and rather copiously. She was examined while under ether, and a tumor was found occupying the right lumbar and hypochondriac regions, apparently extending into the pelvic cavity. The tumor was entirely disconnected from the uterus. By means of an aspirator, six ounces of a thinnish, glairy, colorless fluid were drawn off through the abdominal wall. Some of this fluid was submitted to the inspection of Dr. I. N. Danforth, who stated that it contained the cell known as 'ovarian.' The tumor was diagnosed as a *cystic tumor of the right ovary*. An operation was performed by Dr. A. Jackson, and the tumor was extracted. On the afternoon of the day following the operation the patient died. A post-mortem examination of the body was made by Dr. Steele one and a half hours after death. The pedicle of the tumor was found to consist of the renal artery, vein, and nerves. The vessels were rather smaller than normal. The right ureter was filled with a thick, cheesy, purulent matter. No connection was found between the cyst and the ovary. It was a degenerated cystic *right kidney* that was removed. On the *left* side was an ovarian cyst about four and a half inches in diameter. The right ovary was also notably enlarged, and contained a cyst about the size of a walnut. The uterus was normal in size and appearance, and the fundus uteri was adherent to the left ovarian cyst. The left kidney and ureter were enlarged to nearly twice their natural size. The pyramids were fairly defined, and the medullary portion presented a granular appearance, and was somewhat paler than usual. The tissues on the right side of the pelvis were indurated as though there had been a previous inflammation in that region."

Having disposed of the case before us, let us now return to the consideration of the ovarian cell. So far as I am aware, this cell was first brought to the notice of the profession in connection with ovarian cysts, by Dr. Thomas M. Drysdale, of Philadelphia, in an essay published in Dr. W. L. Atlee's book on Ovarian Tumors. Dr. Drysdale says that the "ovarian cell is generally round but sometimes a little oval in form, is very delicate, transparent, and contains a number of fine granules, but no nucleus;" and, "This ovarian granular cell I consider as diagnostic of ovarian dropsy, and have seldom failed to find it in this fluid, except in some of the earlier cases, where it probably existed, but was overlooked from inexperience in the examination of these specimens." (Page 460.)

You will observe that Dr. Drysdale, according to the language quoted, regards the granular ovarian cell as "diagnostic of ovarian dropsy," and in this conclusion Dr. Washington L. Atlee — perhaps the greatest of American ovariologists — fully coincides. Nevertheless, with the experience gained from Dr. Jackson's case before me, I think I am fully warranted in saying that the ovarian cell cannot be regarded as infallible. During the past three or four years, I suppose I have examined from fifteen to twenty specimens of ovarian fluid for different surgeons. I have, therefore, acquired a considerable degree of familiarity with the microscopic appearances of the "granular ovarian cell," and, I think, may fairly claim to be capable of recognizing it when I see it. At all events, if the appearances of the ovarian cell are not so pronounced that a microscopist of fair experience can recognize it after having seen it fifteen or twenty times, its practical diagnostic value must be exceedingly small.

So far as my experience goes, it is fully in accord with that of Dr. Drysdale in this: that there is generally — and probably always — present in the fluid found in ovarian cysts the peculiar granular cell described by him. I have found it in every specimen of ovarian fluid which I have examined, and on physiological or pathological grounds alone I should always expect to find it. If we could add that it is never found in any other pelvic or abdominal cyst, its diagnostic infallibility would of course be established. But we are compelled to make a very decisive exception, so far at least as the cystic kidney is concerned. Upon examining the fluid which Dr. Jackson sent me I found numerous very typical specimens of the granular ovarian cells; they presented the usual microscopic appearances, and the usual behavior in the presence of reagents. In fact they *were* the well-known granular cells which have come to be regarded as so important by many ovariologists. Hence I had no hesitation in saying to Dr. Jackson that if the ovarian cell were a sure indication of ovarian cyst, his case was of that nature.

I have never been able to see *why* a diseased ovary should be endowed with the power of producing a cell unlike any other cell produced by organs of similar origin and structure; and unless such a power be granted, the granular ovarian cell cannot be regarded as infallibly diagnostic.

What is the ovarian cell? Since it must in some way be derived from or formed within the ovarian cyst or cysts, we must first ask, Whence come ovarian cysts? Without entering into an exhaustive discussion of the matter, I will simply say that to me the weight of evidence points strongly to the conclusion that ovarian cysts are almost always — if not always — the result of changes which take place in the Graafian follicles, or, as Peaslee more correctly calls them, vesicles. These vesi-

cles are lined with their own peculiar epithelial cells; which have their special duties to perform during the process of ovulation. But if, in place of normal ovulation, we have a process of cystic degeneration, these cells seem to multiply more rapidly than usual, and degenerate faster; that is, they undergo a process of what, I think, may be called, on correct pathological grounds, acute fatty degeneration. Hence they are "granular" cells, that is, they are rapidly converted by fatty metamorphosis into granular masses or masses of granules. Therefore they vary in size and form, agreeing only in this, that they are always granular. Hence, also, they are, as Drysdale says, without nuclei, because so rapid and general is this process of fatty metamorphosis that the nucleus is almost always destroyed. It is, however, true that sometimes the outlines of the nucleus, in a more or less granular condition, may be made out by the use of carmine which is quite freshly prepared, or, as the chemists would say, "nascent" carmine. The "granular ovarian cells," then, are probably nothing more nor less than the epithelial cells of the Graafian vesicles, which have been cast off prior to their complete development, and have undergone rapid fatty metamorphosis. Their extreme delicacy and transparency are doubtless due to the fact that they are so constantly immersed in the albuminous ovarian fluid which so closely resembles serum. It is well known among practical histologists that serum is a most admirable medium for the purpose of rendering cells transparent. The ovarian cysts, then, you will observe, are the distended Graafian vesicles, surrounded by a greater or less amount of the fibrous stroma of the ovary, — also distended and thinned, — and containing multitudes of their own epithelial cells, in various stages of growth, but always granular from fatty degeneration.

Now, in the so-called cystic kidney we have essentially the same state of things. The kidney is mainly composed of tubes which are coiled up and packed away so as best to economize space. These tubes are lined by epithelial cells which are very like those which line the Graafian vesicles. Indeed, the epithelial cells of both the ovarian vesicles and renal tubes were originally derived from the same source, namely, an in-folding or separation of a group of cells from the middle layer of the germinal membrane, at a very early period of intra-uterine development. Hence they are both subject to essentially the same laws of growth or development, and, presumably, under similar pathological conditions, the same laws of degeneration and decay; and I think a knowledge of this fact alone ought to lead us to anticipate the results already described. In hydronephrosis — which you must not confound with pyonephrosis or cystic degeneration of the secreting portion of the kidney — we have a slow but gradually increasing retention of the urine, caused by some obstacle which partially interferes with its escape



through the ureter. There are various sources of partial retention known to pathologists which I cannot now stop to describe, but the consequences are always the same; the urine is formed a little faster than it escapes, and hence the pelvis of the kidney is gradually distended. In the next place the pyramids are pushed back, the calyces are distended, and the whole organ becomes a lobulated sac. In other words, it is gradually unraveled, so to speak, and made to retrace the steps by or through which it was developed, and we have as a result an enlarged model of the lobulated fetal kidney, or a pattern of the kidney of the lower mammals. Meantime the circulation is partially arrested by pressure, nutrition is impaired, and there follows fatty degeneration of the epithelial cells of the compressed and wasting tubuli, as a simple and necessary pathological sequence. Meantime, also, the renal vein being more easily compressed than the renal artery, we have mechanical congestion of the Malpighian tufts, and the consequent transudation of serum; hence, "dropsical" kidney. Now, if the fluid from a well-marked and uncomplicated case of hydronephrosis be examined, we shall find that it contains granular cells precisely like the ovarian cells; in fact, in Dr. Jackson's case their identity with the true ovarian cells was perfect. I am able to speak with confidence on this point because only a couple of days after receiving the kidney from Dr. Jackson I had an opportunity of examining a specimen of veritable ovarian fluid, and of comparing the genuine ovarian cells with those found in the dropsical kidney.

In estimating the diagnostic value of the ovarian cells, therefore, we must remember that similar cells are found in cystic kidneys, and that we must be on our guard against mistaking a distended kidney for ovarian dropsy. I know of no other organ likely to be mistaken for an ovary, or in that region of the body from which such cells could be derived, so that it is probably safe to say that the "granular ovarian cell" is certainly diagnostic of either a cystic kidney or a cystic ovary.

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#### NOTES ON CONTRIBUTIONS TO THE ARMY MEDICAL MUSEUM BY CIVIL PRACTITIONERS.

BY GEORGE A. OTIS, M. D.,

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THE first official notice of the collections constituting the Army Medical Museum appears in Circular 2 of the War Department, Washington, May 21, 1862. Here medical officers of the army "are directed diligently to collect and to forward to the office of the surgeon-general all specimens of morbid anatomy, surgical or medical, which may be regarded as valuable." On January 10, 1863, Surgeon J. H. Brinton, U. S. V., printed a catalogue compiled

by Assistant-Surgeon W. Moss, U. S. V.,<sup>1</sup> with brief descriptions of 985 surgical and 106 medical specimens. Soon after the conclusion of the war the collections for the museum had so greatly augmented that it became necessary to revise their classification. Instituted primarily for the collection and preservation of specimens illustrating the injuries and diseases that produce death or disability during war, and thus affording materials for precise methods of study of problems regarding the diminution of mortality and alleviation of suffering in armies, the museum had received contributions relating to collateral subjects. Many pathological specimens not specially pertaining to military medicine or surgery had been donated. Many preparations of human and comparative anatomy had been received, a cabinet of microscopical preparations had been accumulated, models and drawings of hospitals, medical and surgical instruments and appliances in great variety, and many objects of ethnological interest had been contributed. Hence the surgeon-general directed the subdivision into six sections: (1) surgical, (2) medical, (3) microscopical, (4) human anatomy, (5) comparative anatomy, (6) miscellaneous. In 1866 quarto printed catalogues were published of the surgical,<sup>2</sup> medical,<sup>3</sup> and microscopical<sup>4</sup> sections, and, in 1876, check lists were printed of the sections of comparative<sup>5</sup> and human anatomy.<sup>6</sup> At the date of the surgeon-general's last annual report, June 30, 1877, the museum contained 19,797 specimens. The medical section with 1376 specimens, microscopical with 7525, and comparative anatomy section with 1824 specimens were in charge of Surgeon J. J. Woodward, U. S. A., and the surgical section with 6776, anatomical with 1816, and miscellaneous with 480 specimens in charge of Assistant Surgeon G. A. Otis, U. S. A., curator.

Of late years surgeons in civil practice have largely contributed to the museum, and it is purposed to avail, from time to time, of the hospitable pages of the JOURNAL to illustrate by selections from their donations how gratefully they are received. This first installment shall comprise some important surgical observations:—

<sup>1</sup> Moss (W.), *Catalogue of the Army Medical Museum, Surgeon-General's Office*, January 1, 1863. Octavo, pp. 58. Washington: Government Printing Office.

<sup>2</sup> *Catalogue of the Surgical Section of the United States Army Medical Museum. Prepared under the direction of the Surgeon-General U. S. Army by Alfred A. Woodhull, Assistant-Surgeon and Brevet-Major U. S. Army.* Washington: Government Printing Office. 1866. 4to. Pp. 664, describing 4719 specimens.

<sup>3</sup> *Catalogue of the Medical Section of the United States Army Medical Museum. Prepared under the direction of the Surgeon-General U. S. Army, by Brevet-Lieutenant-Colonel J. J. Woodward, Assistant-Surgeon U. S. Army, in charge of the Medical and Microscopical Sections of the Museum.* Washington: Government Printing Office. 1867. 4to. Pp. 136, describing 877 specimens.

<sup>4</sup> *Catalogue of the Microscopical Section of the United States Army Medical Museum. Prepared under the direction of the Surgeon-General U. S. Army, by Brevet-Major Edward Curtis.* Washington: Government Printing Office. 1867. 4to. Pp. 161, describing 2120 specimens.

<sup>5</sup> *List of the Skeletons and Crania in the Section of Comparative Anatomy of the United States Army Medical Museum.* By Dr. H. C. Yarrow. Washington, D. C. 1876. 8vo. Pp. 52.

<sup>6</sup> *Check List of Preparations and Objects in the Section of Human Anatomy of the U. S. Army Medical Museum.* By Brevet-Lieutenant-Colonel G. A. Otis, Assistant-Surgeon U. S. Army. Washington. 1876. 8vo. Pp. 135.

**CASE I.**—*Excision of the Head and Upper Third of the Right Femur for Coxitis and Caries*, by HUNTER MCGUIRE, Professor of Surgery in the Medical College of Virginia. The pathological specimen represented in the adjacent wood-cut (Figure 1) was contributed to the Army Medical Museum by the operator, January 3, 1873, and is numbered 6217 of Section I, the surgical section of the museum. Dr. McGuire forwarded with the specimen

memoranda including letters from the patient, giving a history of his ailment, and notes by the clinical clerk of the hospital. Benjamin L. Davis, a farmer, of Ashmoore Post-Office, Southampton County, Virginia, aged thirty-seven years, of large frame, and formerly of robust development, wrote to Dr. H. McGuire, October 1, 1872, as follows: "I have been afflicted with disease of my right hip and thigh nearly three years. I thought it was rheumatism. I have had several doctors to tend me, and none have done me more than little good. My leg has shrunk away considerably from the hip downwards. I have been unable to walk without crutches for nearly two years, and I have suffered great pain at times. In January, 1872, a rising made its appearance on the thigh, about three inches below the hip-joint, which has been discharging yellowish, watery matter, and sometimes hard lumps of matter streaked with blood and sometimes clotted like cold bruised blood. Several pieces of bone have been discharged through the opening below the hip-joint. The largest piece is about the size of the little finger, and nearly a quarter of an inch thick. The doctors tell me I ought to go to some hospital and have my leg split open and the bone scraped, and they think by these means I would get well.

They say it ought to be done by a surgeon experienced in such cases, but I do not know what would be best, and hope that you will give me your best and kindest advice on the subject. I am certainly in great need of relief. Please answer this letter as soon as you get it, and remember I shall need mighty good attention, or I shall not be able to stand my suffering. Let me know if you can do me any good, and if you conclude to take the case, tell me the terms at your institution, with directions, so that I can find you."

Early in November Mr. Davis arrived at the Infirmary, in Richmond, attached to the Medical College of Virginia. He was placed on a good regimen, and carefully prepared to undergo the operation of excision of the upper portion of the right femur. The clinical clerk notes: "On November 18th the patient was anesthetized by chloroform, and the head and seven inches of the upper extremity were excised by Professor Hunter McGuire. The operation lasted one and a half hours. The wound was dressed with dilute carbolic acid in olive oil, one part to forty, and oakum. It was impracticable to straighten the limb on account of the contraction of the knee and the intense pain induced by attempts at extension.

"The limb was placed and supported by small bran cushions. Reaction soon came on. The pain following the operation was intense and continuous, though allayed by sulphate of morphia in half-grain doses, administered by the stomach at first, but more effectually afterwards by the same drug injected hypodermically, the dose being increased to three fourths of a grain, which gave comparative ease for three or four hours, when the patient would sleep, and a repetition of the anodyne would be required. Whisky was administered every half hour at first, and then every hour, until it was ultimately rejected altogether.

"November 19th, the patient suffered greatly with nausea, the stomach rejecting everything. Pulse 130. Morphia solution administered hypodermically, three quarters of a grain every four hours. Considerable bloody serum discharged from the wound. November 20th. Patient more comfortable. Half-grain doses of morphia every six hours. Nausea persistent; patient craves only ice-water. Outer dressings removed, wound cleansed, and dressings renewed. Discharge from wound diminishing. Had some good sleep during the previous night. Frequent liquid alvine evacuations were troublesome in the forenoon. Starch and laudanum injections were ineffectually administered, and in the afternoon dilute sulphuric acid with fluid extract of opium was given every four hours, and hypodermic injections of morphia were continued. November 21st. Patient improved; pulse 90; nausea less; diarrhoea. Took brandy at noon, and chicken soup. The anodynes were repeated when necessary. The local dressings were renewed. November 22d. Patient rested better; pulse 90; stomach retains food, including eggs, milk, and beefsteak. Diarrhoea still un-



(FIG. 1.) Excised upper extremity of necrosed right femur.

checked, but less troublesome. Morphia, in half-grain doses, and brandy were administered thrice daily or oftener. November 24th. Patient improved. In the last forty-eight hours less irritable. Local and general treatment continued. November 25th. Pulse averages 90 in the forenoon, 100 in the evening. Appetite good; wound washed and dressed with carbolyzed lotions. Much excoriation of left buttock, to which applications of lime-water and lard were made. November 26th. Restless; anorexia; pulse 110. Increased the amount of anodyne medicine. November 27th. Great mental depression. At noon the pulse increased in rapidity, counting 150; whisky or brandy was given every two hours with milk. Glycerole of bismuth was applied to the left buttock. A pill of sulphate of iron and quinine and a draught with arsenite of potassa ordered every four hours. November 28th. Erysipelas invaded the wound. It is dressed with lime-water and lard. A bed-sore on the left buttock is dressed with bismuth. Great restlessness, and the morphia has to be repeated every two hours. Quinine and Fowler's solution were administered. Erysipelas dressed with white of egg, corrosive sublimate, and morphia. November 30th. For the last few days the patient was quiet only when under the influence of morphia. The mind was wandering, the abdomen tympanitic. There was copious expectoration of a dark mucous fluid. The patient sank, and died at six of the evening of November 30, 1872."

The specimen shows destruction of the articular cartilage and great erosion of the head of the femur. Evidences of grave osteitis extend far down the shaft. There was extreme rarefaction of the cancerous structure of the shaft, and it was so light that on maceration it even floated in pure sulphuric ether. The total weight of the excised portion of the bone was two ounces and eighty-six grains avoirdupois.

The next case has not been previously formally recorded, though I casually alluded to it in a foot-note at page 283 of Circular No. 3, S. G. O., 1871. In my report on Amputations at the Hip-Joint in Military Surgery, in 1867, I urged the propriety of classifying these operations into the four groups of primary, intermediary, and secondary operations, and reamputations. It was held that disarticulations at the hip succeeding prior amputations in the continuity of the thigh, or ablations of thigh stumps, differed widely in the risk attendant on them, and that the term reamputations, if awkward, was unlikely to be misunderstood. An analysis of Guthrie's Ciudad Rodrigo case, and of the seven reamputations at the hip practiced during the Crimean war, — six after amputations for shot fractures and one after a bayonet stab at the knee, — showed that the fatal results in four of the cases arose from generally avoidable causes, and that, in military surgery, a favorable result of reamputation at the hip might be usually anticipated, since the operation removed a source of irritation. After the reamputation at the hip in the case of Fabry, 4th U. S. artillery, in May, 1870, a pensioner who now enjoys robust health, Dr. Lincoln, who assisted me in that operation, concurred with me in the belief that the proceeding might have been less perilous if the exarticulation had been effected as in excision of the upper extremity of the femur, respecting the femoral and gluteal vessels. In Fabry's case, the huge involucrum, studded with massive osteophytes and enveloped with thickened periosteum, presented difficulties for such a proceeding, but it was thought that in most of the examples of necrosis of the femur following osteomyelitis the plan of enucleating the bone without disturbing the more vascular soft parts would be feasible.

CASE II. — *Amputation at the Right Hip-Joint after Prior Amputation at Mid-Thigh for Shot Fracture of the Femur*, by DR. N. S. LINCOLN, of Washington. Private W. Cotter, of Co. E, Ninth New Hampshire Volunteers, aged twenty-seven, was wounded at Petersburg, July 30, 1864. Surgeon J. Harris, Seventh Rhode Island, recorded a shot fracture of the lower third of the right thigh, for which primary amputation was performed. The patient was removed the next day to the field hospital at City Point, and thence, on August 3d, to

Douglas Hospital, at Washington. Assistant-Surgeon W. F. Norris, U. S. A., noted the supervention of osteomyelitis, which resulted in the formation of a cylindrical sequestrum nearly six inches long, numbered 252 Army Medical Museum, and indicated in the left-hand figure of the three specimens shown in the wood-cut (Figure 2). This was removed on November 29th. A large involucrum remained, and a persistent fistula which refused to be entirely closed. On November 2, 1865, the patient was transferred to Harewood Hospital, and subsequently to the Washington Post Hospital, where, on June 6, 1866, Assistant-Surgeon W. Thomson, U. S. A., finding it impossible to close the sinuses leading to the hyperostosed



(FIG. 2.) Patient after reamputation at the right hip.

extremity of the femur, resected two inches of the bone (Specimen 4954, Army Medical Museum) the right of the three specimens shown in the wood-cut. The wound healed kindly, but with the same interminable fistulous track. On October 15, 1866, the probe still led to necrosed bone at the extremity of the femur, and the patient was discharged and pensioned. The following year the patient was stationed for a time at Bellevue Hospital, New York, where he stated that Dr. H. B. Sands and Dr. F. H. Hamilton at different times removed portions of necrosed bone. On October 5, 1871, the pensioner Cotter entered the Providence Hospital, Washington, and on October 15, 1871, Dr. N. S. Lincoln exarticulated the head, neck, and trochanters, with what remained of the shaft of the femur, represented in the middle of the specimens shown in the wood-cut. The femoral vessels were respected, so that the disarticulation might be said to have resembled an excision rather than a reamputation. The patient was able to be about in a short time, and, on April 22, 1872, he visited the Army Medical Museum, and a photograph was made of the stump, which is copied in the adjoining wood-cut drawing (Fig. 2). Subsequently, the pensioner entered the National Military Asylum at Elizabeth City, Virginia. Examiner McDermott certified that there were occasional abscesses about the cicatrix, impairing his health by the constant irritation and drain upon the system. Cotter died at Queenstown, Ireland, January 21, 1874, while on a furlough from the asylum, nearly ten years after the reception of his injury.

There are thirty-two recorded examples of reamputations at the hip, with eighteen recoveries and fourteen deaths, or a mortality-rate of 43.7. Sixteen may be classified as disarticulations for traumatic and sixteen for pathological causes.

Eleven cases belong to military surgery; of these, nine succeeded amputations in the thigh for shot fracture, namely, Guthrie's, 1812, G. Buck's, 1864, Haszenberg's, 1864, and Whitcomb's, 1866, fatal cases, and Packard's, 1865, Fauntleroy's, 1865, T. G. Morton's, 1866, Otis's, 1870, and Lincoln's, 1871, recoveries. Two disarticulations at the hip succeeded amputation for stabs in the knee-joint, — A. Mott's, 1864, successful, Fayrer's, 1867, fatal.<sup>1</sup> Five exarticulations followed amputations for bad fractures of the femur, namely: Syme's, 1848, Roux's, 1859, recoveries; Heyfelder's, 1861, fatal; Fayrer's, 1864, recovery; Fayrer's, 1865, fatal.<sup>2</sup> There were eight exarticulations following amputations for ostitis, osteomyelitis, caries or necrosis, the causes of the original mutilation being sometimes undefined, namely: A. Cooper's, 1824, Bradbury's, 1851, Beck's, 1856, and Roser's, 1857, successful; and Textor's, 1851, Chelius's, 1853, Heyfelder's, 1854, and Hancock's, 1860, fatal.<sup>3</sup> There were also eight exarticulations following amputations for malignant or heterogeneous growths, namely, Mayo's, 1835, Boisseau's, 1841, W. S. Cox's, 1844, Van Buren's, 1850, Gros Clark's, 1866, recoveries; and Chelius's, 1845, Volkmann's, 1868, Lister's, 1872, fatal cases.<sup>4</sup>

The formation of vesical calculi about gunshot projectiles that have lodged in the bladder is a rare complication that has been noticed since early times. Dionis, Cheselden, and others, have recorded examples of such concretions removed by lithotomy. Perhaps the earliest instance is recorded by Covillard, and dates from 1633. In 1850, Mr. J. Dixon (*London Med.-Chir. Trans.*, vol. xxxiii., p. 199) was able to enumerate sixteen cases of vesical calculi removed by lithotomy, and three in which they were found in the bladder after death. In vol. ii. of part ii. of the *Medical and Surgical History of the Rebellion*, pp. 269-299, a number of analogous instances are described, and many of the specimens are figured. A large phosphatic calculus from a soldier, shot through the sacrum at Gettysburg eight years previously, was successfully removed in November, 1871, by Dr. Samuel Cabot, of Boston, and is now preserved in the cabinet of the Society for Medical Improvement, and a full description is printed in the proceedings of the society in this *JOURNAL* for 1872, vol. ix., N. S., page 169. To the collection of the Army Medical Museum, already rich in such specimens, the following has recently been added:

<sup>1</sup> Guthrie's case is recorded in his *Treatise on Gunshot Wounds*, 3d ed., London, 1827, p. 332; and the cases of Buck, Haszenburg, Whitcomb, Packard, Fauntleroy, and Morton in *Circular 7*, S. G. O., 1867, pp. 47-58. Otis's and Lincoln's in *Circular No. 3*, S. G. O., 1871, p. 215 and p. 283; A. Mott's in Hamilton's *Treatise on Military Surgery*, 1865, p. 629, and Fayrer's in the *Med. Times and Gaz.*, 1867, vol. ii., p. 483, and Fayrer's in *Clin. and Path. Obs.* in India, London, 1873, p. 489; Packard's case is also recorded in *New York Med. Jour.*, 1865, vol. ii., p. 165; Fauntleroy's in *Richmond Med. Jour.*, 1866, vol. i., p. 7; and Morton's in *Am. Jour. Med. Sci.*, 1866, vol. iii., p. 17.

<sup>2</sup> Syme's case is recorded in *Edinb. and Lond. Monthly Jour.*, 1848; Jules Roux's in *Gaz. hebdom. de Paris*, 1860, pp. 292 and 297; Heyfelder's in *Deutsche Klinik*, 1862, S. 275; Fayrer's two cases in *Clin. and Path. Obs.* in India, 1873, p. 489.

<sup>3</sup> A. Cooper's case was first published in *London Lancet*, 1824, vol. ii., p. 96; Bradbury's in *Boston Med. and Surg. Jour.*, 1852, vol. lxi., p. 349; Beck's in *Deutsche Klinik*, 1856, No. 47; Roser's in Thieme's *Diss.*, Leipzig, 1867, p. 9; Textor's in Eache's *Diss.*, Würzburg, 1863; Chelius's in Thieme's *Diss.*, Leipzig, 1867, S. 8; Heyfelder's in Thieme's *Diss.*, Leipzig, 1867, S. 8; and Hancock's in *London Lancet*, 1860, vol. i., p. 319.

<sup>4</sup> Mayo's case is reported in Costello's *Cyclopædia of Surgery*, 1841, vol. i., p. 182, and S. Cooper's *Dict. of Pract. Surgery*, 8th ed., 1861, p. 117; Boisseau's in Metz's *Diss.*, Würzburg, 1841, S. 17, and Schneider's *Diss.*, Würzburg, 1848, S. 14; W. S. Cox's in *A Memoir on Amp. at the Hip-Joint*, London, 1845; Van Buren's in *Contrib. to Pract. Surg.*, Phila., 1865, p. 10; Gros Clark's in *London Lancet*, 1867, vol. i., p. 11; Chelius's in Bruch, *Die Diagnose der bösartigen Geschwülste*, Mainz, 1847, p. 8; Volkmann's in *Deutsche Klinik*, 1868, p. 388, and Völtner's *Diss.*, Halle, 1868, and Lister's in *Reyher's Ueber die Lister'sche Wundbehandlung*, in *Langenbeck's Archiv*, B. xvii., p. 616.



**CASE III. — Successful Lithotomy for the Removal of a Vesical Calculus having a Fragment of a Musket Ball as its Nucleus,** by HENRY F. CAMPBELL, of Augusta, Georgia. The subject of this operation was private W. B. Griffen, a Confederate soldier, of a South Carolina regiment. He was wounded July 3, 1863, at the battle of Gettysburg. He returned to Abbeville District after the war, and remained there till operated on for the removal of the stone, January 22, 1868, a period of over four years and a half. The patient was the subject of a shortened and distorted union of a fracture in the upper part of the right thigh, produced by a minie-ball, and had suffered from symptoms of vesical irritation and more or less trouble in passing water from the first moment of the reception of the wound. A large portion of the distorted ball was removed from the neighborhood of the fracture by the field surgeons at the time the case was first examined. When I removed the ball by lateral operation its weight was four and one half ounces. The composition of the concretion is supposed to be mainly phosphate of lime. This patient left the hospital at Augusta, perfectly well, in twenty days, and returned to his plowing forty days after the operation. The edge of a flattened ball was found exposed on the under surface of the irregularly shaped concretion. I think that the lead was arrested in the neck of the bladder, and that the concretion deposited about it in that situation; hence the stone was partly in the bladder and partly projecting into the neck of the viscus.



(FIG. 3.) Section of a vesical calculus formed about a fragment of a musket ball. Specimen 6732, Army Medical Museum, 3.

Vesical calculi having nuclei of bone fragments are also very rare. Since the late civil war in this country, three instances have been reported in which bone splinters driven into the cavity of the bladder have been found to be the nuclei for depositions of calcareous matter, forming concretions that were successfully removed by lithotomy (*Med. and Surg. Hist. of the War of the Rebellion*, vol. ii., part ii., pp. 277, 278.) The specimen from a fourth case has been contributed to the Army Medical Museum, by Dr. Henry F. Campbell.

**CASE IV. Successful Bilateral Lithotomy for a Vesical Concretion with a Fragment of Bone as a Nucleus,** by HENRY F. CAMPBELL, of Augusta, Georgia. The subject of this operation was Colonel M. J. Crawley, of Holcomb's Legion, a South Carolina Confederate regiment. "He was wounded in action near Malvern Hill, July 28, 1864. The ball entered in front, somewhat to the left of the symphysis pubis, perforating the body of the bone and traversing the bladder, and passed out near the fold of the left buttock. At the time of examination, September 26, 1868, there was great vesical irritation. Very little urine passed by the urethra; nearly all was discharged through the fistulous track of the ball which had traversed the pelvis. This track had been open almost continuously since the receipt of the wound. He seemed to have a fair degree of control of the urine, and did not pass water through the fistulous track until, in his own language, "he was called on to void it." His youngest child was some months over four years of age. On September 28, 1868, Dr. Henry F. Campbell removed the calculus. A section of the concretion, half the size of nature, is represented in the adjacent wood-cut (Figure 4). The nucleus was found to consist of a spiculum of laminated bone detached from the pubic wall and imbedded in concentric layers of magnesian phosphate. Four years and two months had elapsed from the date of the reception of the injury until the operation. Secondary hæmorrhage occurred on the tenth day, but was arrested by pressure. The patient recovered rapidly. Virility was restored, and he became the father of another child within one year after removal of the stone. The notes above given are briefly compiled from the manuscript of a paper on lithotomy and the pathology of the calculous diathesis which I had prepared for the Centennial Medical Congress. I submitted a synopsis of my paper, but did not get it ready for publication in the Transactions. If it is ever published anywhere I will take pleasure in sending to the National Medical Library a full report of my forty or fifty cases of lithotomy."



(FIG. 4.) Vesical calculus formed about a nucleus of bone. Specimen 6733, Army Medical Museum, 3.

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## RECENT PROGRESS IN MEDICAL CHEMISTRY.

BY E. S. WOOD, M. D.

## URINARY CHEMISTRY.

*Indican.* — H. Senator<sup>1</sup> has published the results of numerous estimations of the amount of indican in the urine in various diseases.

The method employed for estimating the indican was not the tedious one of Jaffé, but a much simpler and shorter one, a combination of the methods recommended by Jaffé and Stockvis. It is performed in the following manner: to ten or fifteen cub. cent. of the urine in a large test tube is added an equal amount of hydrochloric acid, and then, with constant shaking, a saturated solution of calcic hypochlorite (chloride of lime) drop by drop, until the greatest intensity of the blue color is reached. This is then shaken with chloroform, which readily dissolves the freshly formed indigo, and separates from the aqueous solution as a blue fluid, the color being more or less deep according to the amount of indican present. In pale urines, which are often very rich in indican, this method will serve to determine its amount with sufficient accuracy for clinical purposes. Dark urines, whose other coloring matters are also decomposed by hydrochloric acid and calcic hypochlorite, should first be decolorized by adding a solution of the basic acetate of lead, avoiding a great excess of this reagent, when, if indican is present, a good indigo extract can be obtained in this way. Albumen must always be separated from the urine before performing the analysis.

An abnormal increase of indican occurs much more frequently in chronic than acute affections, especially in consumption and exhaustive diseases. Patients who eat little or nothing, or who vomit a part of what they do eat, or digest it badly, often have an enormous increase of indican in their urine. The greater the anæmia the more indican appears to exist in the urine.

Of the acute diseases, diffuse peritonitis is the only one attended with an excessive increase of indican in the urine. A considerable increase was also found in subacute peritonitis, and in several cases of circumscribed peritonitis. In typhoid fever it may also be absolutely increased.

Of chronic diseases, twelve cases of carcinoma of the stomach (both with and without coexistence of the disease in the neighboring organs) were examined, and in all there was found a very great increase of the indican in the urine; this increase was not at all influenced by the condition of the intestinal discharges. A less, but still a very large amount was found in the urine in cases of ulcer of the stomach.

Next to cancer of the stomach the largest amount of indican in the urine was found in cases of multiple lymphoma and lymphosarcoma,

<sup>1</sup> *Centralblatt für die medicinischen Wissenschaften*, 1877, No. 20, page 357.

especially when located wholly or in part in the abdomen. In two of these cases the supra-renal capsules were affected, and there was a bronze coloration of the skin. (Rosenstein has found the indican much increased in Addison's disease.) The urine of children affected with glandular enlargements, swollen abdomen, and symptoms of so-called *tabes mesenterica* is especially rich in indican.

Usually there is an increase of indican in the urine in cases of advanced pulmonary phthisis, especially when attended with diarrhoea and amyloid degeneration of the various organs. Amyloid degeneration of the kidney from other causes does not appear to increase it, nor do either acute or chronic diffuse (parenchymatous) nephritis, but the author observed an increase in four cases of granular atrophy of the kidney.

In chlorosis, leukaemia, pseudo-leukaemia, and progressive pernicious anaemia, there was a moderate elimination of indican. In cases of constipation due to atony or mechanical obstruction in the large intestine, as in cases of parametritis without peritonitis, but little indican has been found.

In connection with the increase of indican, Salkowski and Baumann<sup>1</sup> have found an increase of other sulpho-acids, such as phenolsulphuric acid. Senator has also found in some cases an increase of lime associated with an increase of the indican.

M. Jaffé<sup>2</sup> also reports the results of his estimations of indican in pathological cases. In one case of cancer of the oesophagus, there being complete inanition at the time of death, seventeen milligrammes of indigo were found in the urine on the day of death. Jaffé observed that fever, in itself, had no influence upon the amount of indican; the increase of indican, therefore, in intestinal diseases attended with fever cannot be ascribed to the generally increased metamorphosis of the albuminous substances. He explains the larger amount of indican in these cases by an increased production of indol from putrefaction of the food in the small intestine, on account of an interference with the absorption of the products of the digestion of the albuminous compounds (peptone, leucin, tyrosin, etc.). Obstruction in the large intestine does not seem to affect the amount of indican, and, therefore, its estimation may prove of some value in locating the position of an intestinal obstruction.

Salkowski<sup>3</sup> uses a method for the approximate estimation of indican which is very similar to that employed by Senator. The urine is treated with hydrochloric acid and calcic hypochlorite in the same way,

<sup>1</sup> The JOURNAL, January 4, 1877, page 13.

<sup>2</sup> Centralblatt für die medicinischen Wissenschaften, 1877, No. 36, page 651, from Virchow's Archiv, lxx., page 72.

<sup>3</sup> Centralblatt für die medicinischen Wissenschaften, 1877, No. 21, page 382, from Virchow's Archiv, lxxviii.

but then, instead of being shaken at once with chloroform, it is made alkaline with sodic hydrate. The earthy phosphates thus precipitated carry down with them the indigo, which is isolated by washing this precipitate with hot water, drying it, and extracting the indigo from it with boiling chloroform. The amount of indigo in the blue solution thus obtained is estimated by comparing it with similar solutions containing a known amount of indigo. This method gives only approximately correct results, and is applicable only to urine which contains a very large amount of indican.

*Urine in Scorbutus.*—Hohlbeck<sup>1</sup> has examined the urine in eight cases of scurvy, of which seven were in adults and one in a fourteen-year old boy. He found that while the disease was on the increase the amount of urine was diminished to about one half the normal amount, the chlorides were diminished almost to complete disappearance, and the specific gravity and coloring matters were increased. There was a relative increase in the amount of potassium in proportion to that of sodium, the average ratio being 1 : 3.3, while after recovery the ratio was 1 : 5. This increase of the potassium is due to the greater destruction of the blood globule.

#### TOXICOLOGY.

*Poisoning by inhaling Dust containing Chrome Yellow.*—Leopold<sup>2</sup> reports five cases of this form of poisoning, one of which proved fatal. The patients were employed in weaving cloth colored with chrome yellow (chromate of lead), which was quite loosely applied to the thread, so that a portion of the pigment was easily detached and became diffused throughout the air of the room. The patients were affected with a yellow-coated tongue, yellow sputa, loss of appetite, malaise, in some cases vomiting, pain in the region of the stomach and umbilicus, obstinate constipation, and debility. The fæces were yellow. These symptoms disappeared in a few weeks after the removal of the cause, except in the case of an infant nine weeks old, who died in six or eight days after the beginning of the symptoms, which, however, did not appear until about three weeks after exposure to the infected atmosphere. The symptoms in this case were fever, restlessness, shrieking, several yellow-fluid stools daily, redness of the skin over the chest and abdomen, parched lips, and, just before death, short respiration.

After death there was found inflammation and perforation of the stomach, the same appearances which were seen in the two cases previously reported by Dr. von Linstow,<sup>3</sup> caused by ingesting the chrome yellow. None of the poison could be detected in any of the organs except the lungs, in which 3.6 milligrammes were found.

<sup>1</sup> Centralblatt für die medicinischen Wissenschaften, 1877, No. 46, page 844, from Petersburg. medicinische Wochenschrift, 1877, No. 33.

<sup>2</sup> Vierteljahresschrift für gerichtliche Medicin, xxvii., page 29.

<sup>3</sup> The JOURNAL, vol. xci., page 34.

This is the third fatal case of chrome-yellow poisoning reported within a few years.

*Dialyzed Iron as an Antidote for Arsenic.* — Richard V. Mattison<sup>1</sup> has performed some experiments to test the value of a solution of dialyzed iron as an antidote for arsenic. He found that a pure solution of the iron compound had no effect upon a pure solution of arsenic, nor upon one containing hydrochloric acid, but if added to the mixture of a solution of arsenic and an artificial gastric juice, the arsenic was rendered insoluble. This action of the gastric juice is due to the neutral salts which it contains; hence, whenever dialyzed iron is administered as an antidote for arsenic, it should be mixed with common salt. This acts by precipitating from the solution of dialyzed iron ferric hydrate (sesquihydrate of iron), which has long been used for this purpose.

In dialyzed iron, therefore, we have a compound from which may be immediately obtained ferric hydrate in a form suitable for administration at once. Of course, the arsenical compound, insoluble or but slowly soluble in the fluids of the stomach and intestine, should be removed as soon as possible from the stomach by an emetic or the stomach-pump, and from the intestine by a cathartic.

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## SECOND ANNUAL REPORT OF THE BOSTON MEDICAL LIBRARY ASSOCIATION.<sup>2</sup>

BY JAMES R. CHADWICK, M. D., LIBRARIAN.

In the report upon the condition of the library, which I had the honor to submit to the association at its first annual meeting last year, I sketched briefly the origin, development, and present condition of all the collections of medical books in and near this city.

In the comparisons thus made possible between our own collection at the end of the first year of its existence and those others which had been in process of formation for periods varying from twenty to seventy-five years, I sought to bring forcibly to the attention of the profession the success that we had already achieved, and the aspirations in which we felt encouraged to indulge. I was able to show you that our library exceeded in the number of medical volumes the Treadwell Library of the Massachusetts General Hospital and the Harvard University Library by about one thousand volumes each; that it nearly equaled the Boston Athenæum; and that it contained fully half as many medical volumes as did the Boston Public Library. This admirable result was, moreover, attained entirely by the liberality of the profession, individually and collectively, but very few dollars having been expended in the purchase of books by the association.

During the past year our acquisitions have been very large and important. Their extent may be best shown by the following table: —

<sup>1</sup> American Journal of Pharmacy, January, 1878, page 23.

<sup>2</sup> Read at the meeting held on October 9, 1877.

In 1876.	In 1877.	
1339	2044	vols. of American journals.
739	936	" " English "
300	495	" " French "
222	278	" " German "
23	40	" " Canadian "
16	28	" " Danish, Swedish, Norwegian, Russian, Italian, and Portuguese journals.
<hr/>		
Total, 2639	3821	vols. of journals.
1849	2645	vols. in general library.
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Total, 4488	6466	vols. in whole library.

Increase in the year is 1978 volumes.

That this collection of volumes may be of the utmost service to the profession it is indispensable that its contents should be known. This end is now fully attained by the admirable card catalogue with cross-references which has been prepared by the unremitting labors of Dr. F. H. Brown, assisted by many members of the association, notably Drs. E. Wigglesworth, E. M. Buckingham, A. Post, and B. O. Kinnear. The labors of these gentlemen merit special thanks on the part of the association.

The individual contributors of books during the years have been too numerous for mention, but the names of Drs. Edward Reynolds, Edward Jarvis, Algernon Coolidge, Benjamin E. Cotting, David W. Cheever, B. S. Shaw, G. H. Bixby, R. T. Edes, D. H. Hayden, J. C. Warren, F. H. Hooper, C. P. and J. J. Putnam, cannot be passed over in silence, owing to the size and value of the private collections which they have given us.

The files of current periodicals remain as large as before, amounting to about one hundred and twenty journals, the greater part being the gifts of the editors and publishers of the Boston Medical and Surgical Journal, of Dr. P. F. Mundé of New York, of the Harvard Medical School, and of Messrs. Codman and Shurtleff.

The reduction of the annual fee to six dollars seems to have proved a wise measure, for, although the receipts from this source have not met our expenses, unsolicited donations of money from Donald Kennedy, Esq., three hundred dollars; J. Ingersoll Bowditch, Esq., fifty dollars; and Dr. Edward Wigglesworth, eighty dollars (for binding); and several others, have enabled us to pay all our obligations and enter upon a new year free from pecuniary encumbrance.

An act of incorporation, which you will be called upon to accept to-day, will give the association a legal status, and put it in condition to receive bequests and donations, which, it is hoped, will be speedily forthcoming.

To facilitate the studies and researches of the profession of the city a check list of medical periodicals is in course of preparation, which will indicate at a glance the public or private library in which every periodical may be consulted. In such ways it is thought that our association may extend its sphere of usefulness beyond the range of its own collection of volumes.

The coöperation of every member of the profession in this city and State is earnestly solicited.



## PROCEEDINGS OF THE CAMBRIDGE SOCIETY FOR MEDICAL IMPROVEMENT.

JAMES A. DOW, M. D., SECRETARY.

DECEMBER 22, 1877. *Chorea in Pregnancy.* — DR. EDGERLY reported two cases of chorea in pregnancy attended by him during the past year.

CASE I. Mrs. A., aged twenty-four, American, married and mother of one child; has not lived with her husband for more than two years; belongs to a neurotic family, her father, whom she resembles, having died insane. Patient rather above medium stature and strongly built; had always been well up to the time she was twenty years old, when she had a severe attack of typhoid fever. Nine months before she came under the doctor's care for chorea, she had an attack of acute articular rheumatism, for which she kept her bed three weeks, but was not entirely well till the end of three months. She became pregnant about the middle of October, but not by her husband. At first she thought herself pregnant, but for some reason had dismissed the idea, notwithstanding she had had morning sickness, suppression of the menses, and other symptoms of pregnancy. About two weeks before she was first seen by Dr. Edgerly she had two teeth extracted, and the next day nearly all the muscles of the right side, including those of the face and neck, were found to be constantly and irregularly convulsed. The patient thought the shock attendant upon the extraction of the teeth had caused the chorea, but her family had previously noticed that for some time before she was peculiarly awkward in her movements, and that she dropped dishes, and other things, in an unaccountable way. When first seen, no other probable cause of chorea appearing, the question of pregnancy was raised, and its possibility denied with apparent sincerity. But the symptoms mentioned, the time, and a vaginal examination made it probable that she was in the beginning of the third month of pregnancy. She was informed of her condition, and that this was the cause of her chorea. When seen again, two days later, the family reported that she came from the doctor's office very much agitated, that she had not slept, indeed she had had but very little sleep for several weeks, and that she was immediately far worse in every way. After this, for fifteen days, though she got several hours of quiet sleep each night under the influence of chloral and bromide, she steadily grew worse. The muscles of the whole right side were in a state of constant and very violent agitation. Her speech was confused and disconnected. Sometimes she could not speak at all; could not feed or dress herself; complained of headache and loss of memory. Her mind also was much affected. She was very passionate and unreasonable, full of freaks and whims. At this time the Fowler's solution which she had been taking was discontinued, and strychnia ordered, resulting in a rapid improvement in all her symptoms. At the end of three weeks she could sew and knit, feed and dress herself. Some time after, she reported a slight attack on the left side, which caused her very little inconvenience, and for which she took no medicine. She was delivered of a healthy child at full term, after an easy labor, and made a rapid and perfect recovery.

CASE II. Miss B., aged nineteen, born in England, small in size, badly nourished, not very intelligent, with no hereditary tendency that could be discovered; has always been sickly. In early years she had the usual diseases of childhood, — measles, whooping-cough, etc. At the age of ten she had pain in her joints and limbs, which were thought to be rheumatic. When twelve years old she had her first attack of chorea, which was believed to be caused by fright, and was severe. After this, before her last attack, she had three other attacks, one of which was very severe, during which she lost her mind, and was almost completely helpless. The last attack came on about the first of March, 1877. Was first seen by Dr. Edgerly, at the Cambridge Dispensary, in June. Did not make her appearance the second time till some time in July. Then the question of pregnancy was raised, and, quite to his surprise, he found that she had not seen her courses since February; had suffered from morning sickness, etc. The uterus was enlarged, extending above the umbilicus, and the movements of the child were plainly visible. According to her account the chorea came on within fifteen days after conception took place, and was throughout mild in type. At this time the muscles of the left hand, arm, and shoulder were moderately convulsed. She suffered from headache and loss of memory, was very irritable, did not sleep well, and had very little relish for food, to compensate for which she drank large quantities of strong tea. She was ordered chloral and bromide, which caused her to sleep much better; also strychnia, cod-liver oil, nourishing diet, and to discontinue her tea-drinking. The improvement was not marked till Fowler's solution was substituted for the strychnia. After this, the gain though slow, was steady. During the last part of September and first of October, she complained of numbness of the forefinger and thumb of the left hand. When this passed off, as it did, she had the same sensation for a short time in the little finger of the right hand. At the same time the muscles of the right hand were observed to be partially convulsed. For some weeks before confinement her appetite was excellent, she slept soundly without medicine, could sew and crochet, which for a long time she had been unable to do. At the time of her confinement, December 5th, there was still slight twitching of the muscles of the left hand. The labor was easy and rapid, and the recovery perfect, all symptoms of her trouble having disappeared.

DR. HILDRETH remarked that there was an elevation of temperature in chorea; he had never seen it mentioned by any author, and asked the probable cause.

DR. MARCY said he thought the increased muscular action caused a slight elevation of the temperature.

DR. STEVENS thought the accelerated action of the heart caused the temperature to rise in this as in some other diseases.

*Strangulated Hernia.* — DR. MARCY reported a case of strangulated inguinal hernia. Patient, a female aged seventy, has had for years an unreduced omental hernia, at times complicated by the escape of a loop of the intestine through the ring. There was nausea and vomiting thirty-six hours before the operation. Assisted in the operation by Dr. Norris. After slightly enlarging the ring the intestine was easily reduced, but the omental

mass, the size of a small orange, was adherent to the walls of the ring, and upon separation presented a number of bleeding points. Because of this, the whole mass was tied with catgut at the ring, and removed. The ring was carefully closed with catgut sutures (a method for securing the permanent cure of the hernia advocated by Dr. Marcy several years ago and published, with cases, in the *JOURNAL*), and the antiseptic treatment was followed as usual. The patient made a perfect recovery, the temperature never exceeding 99° F., and the wound healed by first intention.

In reply to a question by Dr. Hildreth as to whether he followed Professor Lister's method complete, Dr. Marcy said that in 1870 he was a student of antiseptic surgery under Professor Lister in Edinburgh. That he was a skeptic as to its theories or benefits at the outset, but returned to America an ardent advocate of the new doctrine, and, as most of the members of this society knew, he had urged its adoption and followed its practice since. Dr. Marcy then explained the care requisite as to cleanliness, the strength of solution, etc. He used one part to twenty for instruments and hands, and one to forty for sponges and dressing. The antiseptic used by Professor Lister being

Acidi carbolici (cryst.)	one part.
Resin	five parts.
Paraffine	seven parts.

Add the acid last. This must be sprinkled upon an equal weight of cloth, which should be first heated in a hot oven, and the whole kept hot under pressure for a period. This dressing is to be applied warm, and in suitable thickness and size to secure protection of the wound, a piece of rubber cloth being used between its outer layers. Dr. Marcy urged the adoption of antiseptic surgery in the treatment of compound fractures, and operations involving injury to the osseous structures, believing that not seldom septic poisoning and its subsequent dangers may be avoided and life saved.

*Syphilis and Marriage.*—DR. HILDRETH inquired of members whether they ever advised marriage of patients who had previously had syphilis, and if so, how long after all symptoms of the disease had disappeared. Dr. Hildreth believed they ought never to marry.

DR. CLARKE said Dr. Bigelow advised waiting two years, which advice he had given.

DR. HOLT always recommended waiting two or three years, and if in that time they are free from all symptoms of the disease, he thought the children could not inherit syphilis.

DR. STEVENS remarked that in the recent discussion in London, Mr. Hutchinson took the ground that syphilis was perfectly curable. He said that he was of the same opinion, but thought it made a difference whether the disease had been treated thoroughly, even after all symptoms had disappeared.

## PROCEEDINGS OF THE ANDROSCOGGIN COUNTY MEDICAL ASSOCIATION.

A. SPRINGER, M. D., SECRETARY.

THE tenth annual meeting of the Androscoggin County Medical Association was held at Lewiston, January 1st. It being the annual meeting, regular papers and discussions were omitted.

Reports of retiring officers show the society to be in a flourishing condition. The election of officers resulted as follows: president, Dr. R. R. Ricker; vice-presidents, Dr. R. Smith, Dr. J. Walker; standing committee, Drs. W. Sturges, O. A. Horr, R. R. Ricker; treasurer, Dr. W. R. Oakes; recording secretary, Dr. A. Springer; corresponding secretary, Dr. O. A. Horr. Officers being elected, Dr. J. W. Beede then gave his parting address, of which the following is a brief synopsis. He said physicians are a necessity now, as in the days of the Great Physician. They have a right to be so, and to claim their special privileges from the community which they serve. There is a need for a cultivated, honorable, and skillful body of professional workers. One cause of the success of quackery is the lack of true culture and honest dealings on the part of many who claim to be physicians. He particularly urged the necessity of thorough study, honest labor, and keeping a high standard of professional aim, that the rank and file of the profession might keep step with the great leaders of medical research, even though in the rear. He alluded to the prospects of brighter days in the near future; saying that medical schools were raising their standards; investigations were multiplying; research in the various branches showing that medicine and surgery are rapidly rising out of the boggy regions of guess-work up to the luminous heights of physical demonstration. He closed with an appeal to the workers of the society to keep the professional armor bright with faithful labor and investigation, not looking for popular favor, but for the rewards of high aspirations and noble aims.

## THE NEW ENGLAND PSYCHOLOGICAL SOCIETY.

B. D. EASTMAN, M. D., SECRETARY.

THE annual meeting of the New England Psychological Society was held at Worcester, December 11, 1877. Officers for the current year were elected as follows: Dr. J. P. Bancroft, president; Dr. H. M. Harlow, vice-president; Dr. B. D. Eastman, secretary and treasurer.

The most important matter before the society was the report from the committee on the trustworthy reporting of recoveries. The committee submitted the following preamble and resolutions, which were unanimously adopted:—

“ *Whereas* the method generally heretofore pursued in reporting the recoveries of patients at the institutions for the insane has, by its avoidance of a definite statement of the repeated recoveries of the same person, in cases of periodical or recurrent insanity, been largely instrumental in imparting to the general reader, and particularly to persons outside of the profession who are specially interested in the subject, an erroneous opinion of the curability of persons afflicted with mental disorder; and

"Whereas, as a result of that erroneous opinion, computations have been made in political and social economy, based upon an assumed proportion of curables among the insane, which is evidently far too large; and

"Whereas the attainment of truth, and not the dissemination of error, is the true object of all statistical science, therefore

"Resolved, that in the preparation of published reports this society recommends the adoption of some method by which that erroneous opinion may be corrected, and, in the future, prevented.

"Resolved, that without prescribing or suggesting a definite formula, it is recommended that a clear exposition should be made of the facts in relation to the following points:—

"First. In regard to patients admitted in the course of the year: the number admitted for the first time, and the number of readmissions, specifying the number who have been received twice, thrice, four and any greater number of times, and also the number who had previously been discharged recovered, specifying likewise the number who had recovered once, twice, thrice, and any greater number of times.

"Second. In regard to patients discharged in the course of the year: the whole number of recoveries, specifying the number of those who recovered for the first time, as well as of those who recovered for the second, the third, the fourth, the fifth, and any time still higher in the scale of numbers.

"Resolved, furthermore, that the true import and value of the statistics of any institution for the insane can be attained in no way other than by an analysis, in the results of which are shown, not alone the number of persons who recovered once, but the number of those same persons who recovered twice, thrice, four, five, or any higher number of times; and that any collection of statistics which has not been subjected to such an analysis is of comparatively little value."

#### ZIEMSEN'S CYCLOPÆDIA, VOLUME XIV.<sup>1</sup>

THIS volume, on diseases of the nervous system, is in many respects one of great interest, but perhaps more than any of the series it shows the disappointing tendency which characterizes much German work. There are historical introductions, learned discussions and theories, but at the end we feel as if the authors were ready, as indeed they are, to join in Faust's despairing complaint, that we might make use of what we do not know, but that the known is useless.<sup>2</sup> The article on angina pectoris may serve as an instance; attacks depending on cardiac disease, ossification of the coronary arteries, etc., are excluded, so that only the nervous kind is considered; that is, it is called nervous, because it cannot be shown to be anything else. There are four kinds: first, the excito-motor cardiac angina, from direct lesion of the ganglia of the heart; second, the regulator angina, which depends on the vagus, and may be direct or indirect; thirdly, we have excito-motor sympathetic angina, and,

<sup>1</sup> William Wood & Co. New York. 1877.

<sup>2</sup> "Was man nicht weiss, das eben brauchte man,  
Und was man weiss, kann man nicht brauchen."

finally, vaso-motor angina. "Of course," adds the author, "the complication of these principal types and their confusion with each other are not at all impossible." The article on epilepsy, by Nothnagel, leaves a similar impression, though we do justice to the vast amount of research it implies and to the skill with which the question is presented. Von Ziemssen is more successful in his paper on chorea, which is an excellent one. We pass over several others to come to the *pièce de résistance* of the volume, — disturbances of speech, by Kussmaul. It begins at the beginning, as far back as the origin of speech, which the author styles an "acquired reflex." We wish he were right when he says, "Speaking involves understanding one's self as well as others." How much quieter it would be if it were so! The *bourgeois gentilhomme* was delighted with science on learning that for forty years he had, unconsciously, been speaking prose; but what would have been his feelings if his professor of philosophy had told him that he had learned to speak it solely by onomatopœia, or, as ordinary people say, by imitation, the child imitating the words of its parent as it does the bark of a dog! Max Muller speaks of this disrespectfully as the "bow-wow theory." We reserve our opinion. The following passage appears to be a condensation of the preliminary part of the work. "For the purposes of speech there exists an apparatus as vast as it is complicated, consisting of nervous tracts and ganglionic centres, which partly occupy the position of the loftiest workshops of the conscious intelligence and of the will, and are partly reflex agencies in which simple and ordered sensory stimuli are converted into motion. Such a thing as a simple 'centre of language,' or 'seat of speech,' does not exist in the brain any more than a 'seat of the soul' in a simple centre." Further on Kussmaul shows that disease of Broca's third left frontal convolution is not necessary for the occurrence of aphasia, and that the faculty of articulation, which is not synonymous with speech in its broadest sense, is probably situated in the medulla. It is to be regretted that Kussmaul does not seem to have heard of that crowbar which was a most efficient lever in prying speech from its alleged seat in Broca's convolution. There are later interesting chapters on the disturbances of speech, stuttering, etc., and on deaf-mutism.

We have endeavored to give the reader some general idea of the nature of this remarkable paper. It is, we believe, a work of great merit, though we confess our inability to discuss it thoroughly. It may be doubted, however, whether it is not too abstruse to be in place in a book of this kind.

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#### NAPHEYS' THERAPEUTICS.<sup>1</sup>

WE cannot describe a compendium of this nature as a work of high merit, nor recommend it as a guide to the beginner. The success it has met with shows, however, that it is a popular book, and it certainly is convenient to be able to turn to a large number of formulæ which are credited to their respective originators.

<sup>1</sup> *Modern Medical Therapeutics*. By GEORGE H. NAPHEYS, A. M., M. D. Fifth edition, enlarged and revised. Philadelphia: D. G. Brinton. 1878.



## RABIES AND HYDROPHOBIA.

It is unfortunate that age should enforce our respect for the word "hydrophobia," although it is less misleading when applied to the disease as it appears in man than in animals. It would be well, therefore, when treating of the disease to avoid "hydrophobia" as far as the dog is concerned, and to use rather the word rabies. We are happy to say that the experience of hydrophobia in man in this neighborhood and in this State has been very limited; popular interest in the topic is at rest, except very locally in the western part of the State. It is, however, a danger always liable to give rise to sudden and unreasoning perturbation, as was at one time the case in our own community, and has been very strikingly so of late in England. It is therefore well, at a time of tranquillity, to settle as far as possible what is known and what is not known on the subject. The recent publication in the *JOURNAL* of a paper read before the Springfield Society for Medical Improvement, and the occurrence of two probable cases of hydrophobia in this city in connection with the agitation across the water, induce us to make a few remarks upon a subject at once so old, so much discussed, and so very unsettled.

The recent excitement in England has resulted in the appointment by the Scientific Grants Commission of a committee to investigate the disease of hydrophobia as it presents itself there, for which purpose a grant of one hundred pounds has been made. The committee is composed of the best men, and their work is to be pursued under three heads: (1.) Investigation of the registered deaths from hydrophobia in England and Wales. (2.) Pathology. (3.) Tabulation and investigation of methods of treatment. There is no lack of material, there having been sixteen deaths from hydrophobia in London alone during the past year. The publication of the report of this committee may be awaited with great interest. In the mean time the most valuable source of information open to us is a series of reports made to the French government by a commission whose labors extended over a series of years, from 1850 to 1868 inclusive. Our own material is too scanty, and the earlier records not sufficiently accurate, to be of much service. During ten years, from 1867 to 1876, inclusive, there were but six recorded deaths from hydrophobia in Massachusetts, and of these two occurred in 1870, and the other four in 1876. The most curious and perhaps important contribution which America makes to the natural history of the disease is the observations in regard to the almost invariably fatal result of the bites of the skunk in certain regions of the West, as reported by Colonel Dodge in Plains of the Great West and their Inhabitants, and by Assistant-Surgeon Janeway in the *New York Medical Record* of March 5, 1875. In the especial region of the valley of the Arkansas River, the bite of the skunk is reported to give rise to hydrophobia in man, although the animal itself be in a normal condition at the time, and its bite is followed in the dog by no bad effect.

In the French investigations two results strike one immediately. Out of the three hundred and thirty cases of hydrophobia, selected as carefully reported, there is not a single one which was not fatal, and not one in which the incubation was prolonged beyond twelve months. Out of two hundred and

twenty-four carefully recorded cases, between 1850 and 1862, there were only eleven with an incubation of over six months, and out of one hundred and six carefully noted cases between the years 1863 and 1868 inclusive, the period covered by the report of Mr. Bouley, there was only one case in which the time of incubation covered eight months; in all the rest it was less than six months. The period of incubation we believe to be shorter in children than in adults, and it is given as such in these reports. The hot iron is strongly urged as the most reliable cautery. The value of statistics as to the ratio of the cauterized who escape is greatly interfered with by the impossibility of ascertaining whether the cauterization was thorough. In this connection we may quote an occurrence which took place in France in 1862. Sixteen persons and an ass were bitten by the same rabid dog; the human beings were all promptly cauterized by medical men (it is to be presumed thoroughly) and escaped; the ass was not treated and died. This would lead one to suspect that many cases reported as cauterized, especially when this was done by the sufferers themselves or by friends, were superficially treated; the percentage of mortality (.32) after cauterization of a wound received from a rabid animal would probably be much lower if cases of thorough cauterization only could be taken.<sup>1</sup> The French reports offer but little comfort in the way of treatment, as might be inferred from the fact that they record no authentic recovery.

The number of cases of rabies reported during the five years from 1850 to 1855, previous to the imposition of a tax upon dogs, was one hundred and sixty-four; that during the first five years subsequent to the imposition of the tax was one hundred and four. This is certainly in favor of the tax, though too much weight was not laid upon the difference, as a fair allowance, especially in this disease, must be made for coincidence. For instance, in one year a large number of cases of hydrophobia were the result of rabies in one animal, a wolf.

After all, these reports serve to show us the difficulties of the subject quite as much as to offer us information. We may safely conclude that the incubation of hydrophobia very rarely indeed extends beyond nine months, but there are a few cases on record in England, too well authenticated to be rejected, in which this period was prolonged to years. It is, *a priori*, hardly more strange and contrary to our general experience that a poison should remain latent in the system during years than during months. The only plausible explanation of the peculiar course of the poison in hydrophobia, namely, its local retention and subsequent liberation, is as applicable to an incubation of eight years as to one of eight months. We believe there is on the other hand no well-attested observation in which rabies in the dog had an incubation of more than eight months, and hence a suggestion made by Bardsley, Youatt, and lately by Sir Thomas Watson, in an excellent article in the *Nineteenth Century* for December, that all dogs should be secluded for eight months, with a view to putting an end to the disease. This measure would be impracticable, and inefficient if practicable.

A more desirable step would be the establishment of a quarantine where

<sup>1</sup> The percentage of deaths from non-cauterized wounds is given at 84.84.

suspected dogs could be detained and kept under observation. The tax upon dogs is a useful safeguard, its stringent enforcement a more useful one. The printing in full upon all licenses of dogs of the excellent remarks upon rabies, published for that purpose by the State Board of Health, April 27, 1877, is a wise measure, and should be strictly enforced. There is insufficient knowledge among the public of the early symptoms of rabies, and a dread of water is still supposed by many to be a usual one. Fourteen rabid dogs were brought to the Brown Institution in London during the year 1877, and in no case had the owner any idea of the serious nature of the ailment of his dog. The owner might be held responsible for injury caused by a dog, a preventive measure perhaps impracticable, but certainly effective. The use of the muzzle is still a vexed question. We should hardly be disposed to advocate it even in times of excitement. It is never thoroughly effectual, is irritating just in proportion as it is effectual, and gives a sense of false security to those disposed to tease or fondle dogs. After a bite from a suspected animal the most thorough and prompt cauterization has long been acknowledged to be indicated in all cases, and excision in some according to situation; but this dictum should be more extended in its application. Interference should never be avoided because hours have elapsed since the receipt of the bite, and excision with cauterization may be desirable even long after. Youatt quotes the cases of two men bitten by a rabid dog; one of them died of hydrophobia, the other had positive symptoms some days later; the cicatrix was excised and the symptoms subsided, returning six days after. The wound was then thoroughly cauterized, and there was no further trouble. The proofs are very strong that a wound inflicted by an animal becoming rabid subsequently to the injury, but infected at the time, may develop hydrophobia in the bitten person. Several such instances are reported in a series of more than one hundred cases of hydrophobia occurring since 1800, and quoted in late numbers of the *Medical Press and Circular*. There is one particularly interesting case taken from the *Medical Gazette* (vol. xxxv. p. 11). Youatt reports a case in point. We should imagine that the lunar caustic would be found more useful than the hot iron in unpracticed hands and in many wounds. Youatt preferred it, and he is reported to have been bitten four times himself, and to have cauterized four hundred cases without losing one. The efficacy probably depends more on the thoroughness of the application than on the character of the caustic. Suction of the wound should not be practiced unless by the sufferer himself, and then only when no other means of relief is at hand. Setting aside the possibility of absorption through the sound mucous membrane, there can be no question of its absorption where there are abrasions of the skin or of the mucous membrane. This we must accept notwithstanding Bollinger's disinclination to do so, and his citation of the apparent immunity of the women at Lyons who earned their living by sucking such wounds.

Sir Thomas Watson suggests a ligature above the wound, and the washing it out with a stream of hot water. He also relates a striking history to show the absorption of the poison through the milk of sheep bitten by a rabid dog, though there is not satisfactory proof of such a supposition; the only apparent alternative is an absorption of the poison directly from the wound by the

mucous membrane. Youatt relates the case of a woman who was attacked by a rabid dog; her dress was torn, but there was no wound upon her person; she shortly after mended her dress, and in doing so pressed down the seams with her teeth. She died from hydrophobia. The case has been lately reported in France of a veterinary surgeon who contracted hydrophobia in making an autopsy upon a dog who died from rabies. A good many experiments have been performed in France to determine the communicability of the disease by the saliva of a hydrophobous person, with results which can hardly be called decisive.

Our knowledge of the treatment and pathology of hydrophobia is still limited and unsatisfactory, although even here there is something to encourage us. As to the treatment we hope to make a few remarks at an early day, especially with a view to calling attention to the use of curare. The gross appearances after death are very un instructive, and are much the same in all cases whether death occur from asphyxia or from asthenia. Among the numerous late investigations into the minute pathology, those which Dr. Gowers, of London, has republished, with plates from the *Pathological Transactions* for 1877 (vol. xxviii.), are the most definite. In an examination of the medulla oblongata and spinal cord in four cases of hydrophobia, he finds certain pretty constant changes which were most intense in the region of the hypoglossal pneumogastric, and glosso-pharyngeal nuclei, and slighter in the auditory, facial, and fifth nuclei. These observations coincide in the more important particulars with those of other late observers, and with those of an examination of ten rabid dogs made at Rudneff's laboratory at St. Petersburg. We may conclude with Dr. Gowers that the distribution rather than the character of the microscopical lesions is to be regarded as peculiar to the disease.

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#### MEDICAL NOTES.

— After Dr. Pinkham's admirable paper on the sanitary condition of Lynn, published in the last report of the State Board of Health, it was excessively disappointing to find that the city rejected the bill allowing them to establish a local board of health by an adverse vote of more than two to one. It is still more discouraging to read the conclusion of the special investigation with regard to their sewerage. The refuse of Lynn is now discharged close to the shore; and the deposits of filth near the sewer outlets at low tide are in a high degree offensive. The proposed plan provides for an intercepting sewer, discharging in the harbor near the mouth of the Saugus River, at a point where the water is a dozen feet deep at low tide; this is suggested as a *remedy*, but the statement is also made that a pumping station and some plan of precipitating the solid parts of the sewage may at a future time be needed. It is better to look the facts squarely in the face, and say to the people of the city in question that, following the above plan, they are simply taking temporary measures which will relieve them of their difficulty for only a while, if the city continues to grow, and that there must inevitably be a nuisance in time caused by flood-tide deposits, which will finally demand radical treatment.

The final proposition to use the sewage-precipitate, if not wanted as a fertilizer, "to good advantage for raising land" and for "filling-in material," out of which to make soil, must be a surprise to those who hoped that there is now such a thing as elementary knowledge in sanitary matters in our State.

— Schiff says that excision of the spleen has no prolonged influence on the absolute or relative quantity of the white or red blood corpuscles.

— *The Canada Lancet* republishes an advertisement first issued in 1800, in the *Medical and Physical Journal* of London, which indicates that Dr. Currie, who first used the cold-water treatment in fevers, was also the first to use a clinical thermometer.

— Our Philadelphia correspondent, Dr. Frank Woodbury, has just been elected a member of the medical staff of the German Hospital of that city, a position formerly held by Dr. Hamilton Osgood, who, as our readers know, has come to Boston to practice his specialty of diseases of the throat and chest.

— Last year an order was passed by the city council of Boston that his honor the mayor be requested to petition the General Court for the passage of an act authorizing the city authorities to regulate, by ordinance, the practice of medicine and pharmacy in this city. It is stated, on good evidence, that there are at least three hundred and sixty-two "doctors'" signs on our streets, some of them covering houses of ill fame, many of them disreputable, and all belonging to persons who do not possess diplomas, and who are often notoriously incompetent. The bill is to provide that the diploma must be shown to an inspector, appointed by the city, at any time. Otherwise, any one advertising himself as a physician, by his sign, is to meet summary punishment. The matter has been referred to the joint committee on water supply and drainage, so that all persons desiring to be heard on the subject will have an opportunity of stating their views. Of course, such an act will not provide for a high standard of medical education at present, and it will not prevent quacks and abortionists from plying their vile trades, but it will save well-meaning people, who run for the nearest doctor, from innocently summoning the most ignorant quack. Some such plan as this is now in successful operation in New Hampshire and Vermont, an instance of which was lately shown in the reprint of the Connecticut River Valley Medical Association.

— An abortionist of Philadelphia, who had carried on his nefarious trade for many years, was finally caught a few days since by the death of a young girl whom he had operated on. The old villain was eighty-two years of age, and when the officers came to arrest him he fell into an apoplectic fit, and died after two days' illness, thus escaping from the clutches of the law.

— Says the *Medical Record*: "Dr. Piffard asserts, as an example of the efficacy imparted to drugs by trituration, that a grain of calomel well rubbed up in sugar and given in twenty doses will often produce the specific effects of the drug when a single dose of twenty grains has failed."

— Dr. Gowers, writing to the *Lancet* for December, states that he has had constructed by Hawksley a modification of Hayem's instrument for counting blood corpuscles, which admits of greater accuracy and can be used with any microscope. Full details are given.

—Karl Friedrich Heinrich Marx, senior of the medical faculty of Göttingen, is dead. After the celebrated Weber, he was the oldest member of the Royal Scientific Society.

—Professor Ghinozzi, the most distinguished physician in Florence, and occupant of the clinical chair at the institute, died December 15th.

—The dignity of Hofrath (Aulic counselor) has been conferred on Arlt and Braun-Fernwald, of Vienna, in consideration of their renown as teachers and practitioners.

—Dr. Sachs, botanist at Wurzburg, has been called to the University of Berlin.

—Ponfick, who now holds a professorship at Göttingen, is mentioned as Cohnheim's successor at Breslau. Cohnheim has accepted a call to Leipzig.

—Czerny, of Heidelberg, has declined an invitation to Prague. Professor Albert, of Innsbruck, was made the second choice of the Prague faculty, and has notified them of his acceptance.

—Under Chapter 133 of the Acts of the Legislature of 1877, Cambridge Lowell, Worcester, Fall River, Lawrence, New Bedford, Somerville, and Newburyport voted to establish independent local boards of health; Chelsea, Lynn, Gloucester, and Fitchburg voted not to do so; in Salem, Springfield, Haverhill, Taunton, and Holyoke no vote was taken on the subject. Salem had already applied to the legislature for a special act, so that no action was needed under this later law.

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#### LETTER FROM CONNECTICUT.

THE recent railway accident at Tariffville suggests the question of how far the managers of a road should be compelled to go in providing for the injured in such disasters. The chief idea in the minds of the officials is to get the road in running order as quickly as possible, that the tide of travel and business may be uninterrupted; and wrecking trains are soon at the scene. If each main division were provided with a hospital car furnished with several beds for the more severely injured, stretchers, and the hospital stores usually needed, including dressings for burns and facilities for making any quantity of hot coffee that might be required, a vast deal of suffering would be relieved and many lives saved; such cars could be sent soon after an accident had occurred, and their cost would be saved in lessened damages to be paid.

Among the injuries was a rather unusual fracture, namely, of the upper maxilla, with separation at the palatal articulation. The anterior segment was freely movable. The case is progressing very favorably under use of the interdental splint.

Cases of deaths from hydrophobia are still not unfrequently reported, and of dogs appearing to be affected with rabies. The latest case of death from hydrophobia, that of Dr. Way, a well known dentist of Suffield, seems to be pretty well substantiated by the fact that several domestic animals bitten by the dog have been affected with symptoms of the same disease, and one died on the same day with aggravated symptoms. In the doctor's case the bite was a slight one, attracting but little attention at the time, and the impressions con-



cerning it had nearly passed out of his mind, when hydrophobic symptoms appeared.

There has of late been an increased interest shown in professional subjects, medical education, and the like. The Hartford Medical Society recently added to its constitution a provision requiring each member to receive no student of medicine who had not a fair education in the common English branches, physics, and chemistry, and to withhold certificates of study from those unable to construe easy Latin. If the standard of medical education is to be generally raised, the individual practitioners as well as the schools must take some action and feel some responsibility. The propriety of requiring a preliminary examination at the Yale Medical School is under discussion; there are some obstacles in the provisions of the charter, but the friends of the measure are quite sanguine of success. The school is unusually full this year, and the plan of written examinations works very successfully; the final examinations in the more elementary branches at the end of the second year are becoming very popular, and few who are eligible neglect them, although they are fully as rigid as the final ones at graduation, and are intended to be very thorough. Several changes have been made of late in the school. Dr. David P. Smith, of Springfield, has the chair of surgery vacated by the resignation of Dr. Francis Bacon, and Dr. J. S. Wilcox, of Hartford, that of theory and practice; a lectureship on ophthalmology and otology, with a weekly clinic, has been established under charge of Dr. W. H. Carmalt, lately of New York, and a weekly gynecological clinic. A series of lectures on insanity has been given during the winter by Dr. H. P. Stearns of the Hartford Retreat, and on alcohol by Dr. T. D. Crothers of Walnut Hill Asylum for Inebriates. The latter institution has been temporarily opened in commodious and pleasant quarters, with accommodations for about twenty patients, and ten are now under treatment. The expenses range from ten to twenty dollars a week. The admissions have thus far been limited mainly to the more remediable class, for example, those who, having used alcohol temporarily to help them over hard places in literary work or business, find a habit established which they are unable to break unaided. The institution as at present conducted furnishes a pleasant home for patients of this class, with every adjunct for recreation, work, and amusement, that can be afforded within its walls, and agreeable, quiet surroundings. The asylum has all necessary legal powers over its inmates, none of whom are received for less than four months, an advantage not possessed by any similar institution, enabling the superintendent to call upon police or constabulary in case of escape, — a very quieting and soothing feature in itself when understood by an unwilling patient.

*The Quarterly Journal of Inebriety*, under the editorship of Dr. Crothers, is now issued from this city, and has certainly a wide sphere of usefulness before it in a field not very well worked.

The Retreat for the Insane in Hartford has been very much improved recently, at an expense of about forty thousand dollars, adding greatly to the appearance of the buildings and grounds, as well as to the accessories of treatment. A series of detached wooden buildings, inconvenient and somewhat unsightly from age, has been replaced by a connected range, in architectural

harmony with the main buildings, made of brick faced with Westerly granite. A greenhouse, forty-eight by twenty feet, has been built in connection with one of the wings, and arranged with seats, for patients to enjoy the sight and perfume of the flowers, while growing as well as when gathered. An extensive lawn has resulted from the compact arrangement of the buildings, to be laid out for ornamental gardening. Minor changes in curbing, grading, drive-ways, and the like, incidental to the changes, are quite marked in their general effects. The system of treatment is the "non-restraint," although it is not carried to the extent practiced in England. Covered beds are used, which can be firmly locked, and they render any other than the horizontal position impossible. A strong wire net-work, the meshes of which are too fine to admit the fingers, with padded sides, is supported on a framework about a foot and a half from the level of the mattress, and is found to possess great advantages for both patients and nurses, rendering recourse to manual restraint much less frequent.

The training schools for nurses at New Haven and Hartford have proved themselves of great value, are rapidly gaining in popular estimation and favor, and the demand for the graduates is fully equal to the supply. All vacancies in the schools are engaged long before they occur, and the schools have every prospect of permanency. The idea of native adaptability for any work, as rather superior to any training, even when the two are combined, is somewhat peculiar to the Connecticut mind, perhaps to New England generally; and there were, of course, the prejudices engendered by the time-honored nurse to be met, an influence as potential as any in perpetuating medical superstition. The trained nurses are heartily welcomed by the physicians, to whom they are, indeed, a perfect godsend; and thus far they have not shown the faintest traces of likeness to that intolerable nuisance, "the old experienced nurse."

The attempt has been made to establish in Hartford a medical journal and library association, with good success, so far as the first is concerned, and very fair as regards the latter, considering the disadvantage of having no collections already in existence as nuclei. About a thousand volumes have been gathered, mainly works of reference and bound files of journals. The society meets twice a month, with abstracts, papers, and discussions. A section on pathology and microscopy has been formed, with a laboratory, that promises well for practical work during the winter. There are journal associations in many of the cities, but the only attempt to establish a medical reference library has been in Hartford.

The subject of a State Board of Health has been again brought before the legislature by petition from the physicians, and with better auspices for success. The importance of the measure and its nature are better understood and appreciated. The Social Science Club of Hartford has been of late discussing sanitary science, and the full reports of the discussions and papers have been of service in instructing public opinion. The questions involved are receiving more attention from the people, whatever the action of the legislature may be. The city of New Haven has the only well-organized, and efficient local board of health in the State, unless the one recently organized in Bridgeport be upon the same model. Elsewhere there is little systematic work, and the educational influence of a state board is certainly needed.

## LARGE DOSE OF CHLORAL.

MR. EDITOR, — The following interesting case occurred in my practice recently, showing to what extent the hydrate of chloral may be used with impunity, ten drachms being taken within ten hours, and being followed by no unpleasant effect.

E. R., aged forty, of intemperate habits, had been drinking for two weeks, having had very little sleep. His nervous system was nearly exhausted, and to obtain the desired rest the following mixture was ordered: —

R $\bar{y}$  Chloral hydrate . . . . . 3 x.  
Syr. simplex . . . . . 3 ij.

S. Half a teaspoonful to be given at once, to be repeated in an hour if necessary.

The nurse began the treatment by giving one drachm of the mixture, and in an hour, as it had no effect, she gave three drachms more, which simply stupefied him for about an hour, taking away all power of locomotion without producing sleep; then two drachms more were given, and he slept for about an hour and a half, snoring heavily, but was very easily awakened and restless, with slow respiration. I then cautioned her about giving any more, especially in such large doses. The effect soon passed off, and three drachms were again given with like result. Things continued in this way until the whole ten drachms were taken within ten hours, after which five or six hours of restless sleep were obtained.

The next day I saw the man, to my surprise learned how the medicine had been used, and to my greater astonishment found him quite well, with the exception of the headache which followed.

JAMES J. HEALY, M. D.

NEWBURYPORT, MASS., December 27, 1877.

## COMPARATIVE MORTALITY-RATES.

	Estimated Population, July 1, 1878.	Deaths during week ending January 26, 1878.	Annual Death-Rates per 1000 living.		
			For the Week.	For the Year 1877.	Mean of ten Years, '68-'77.
New York.	1,093,171	477	22.69	24.32	28.71
Philadelphia.	876,118	303	17.99	18.80	21.54
Brooklyn.	549,438	193	18.27	21.51	25.50
Chicago.	460,000	127	14.36	17.83	22.39
Boston.	375,476	138	19.11	20.10	24.34
Providence.	104,500	44	21.89	18.81	19.20
Lowell.	55,798	12	11.18	19.09	22.50
Worcester.	54,937	17	16.09	21.07	22.30
Cambridge.	53,547	17	16.50	18.69	20.83
Fall River.	53,207	10	9.78	21.35	24.96
Lynn.	35,528	7	10.25	20.42	19.67
Springfield.	33,981	5	7.66	16.04	19.77
Salem.	27,140	7	13.41	20.38	21.15

**OBITUARY.**—Dr. William Stokes, of Dublin, died on January 7th, at the age of seventy-six years. He had been for some time past in failing health, never having fully recovered from an injury received five years since. He had retired from practice. In 1825 he took his degree at Edinburgh. In 1828 he published his first work on *The Application of the Stethoscope to the Diagnosis and Treatment of Thoracic Disease*. This was followed by one entitled *The Diagnosis and Treatment of Disease of the Chest*, and later by *The Diseases of the Heart and Aorta*. He was appointed professor of physic to the University of Dublin, succeeding his father. He rose rapidly to a large practice, and has been during the last half century one of the most prominent men in the profession in Ireland. He received honorary degrees from Oxford, Cambridge, and Edinburgh; also the German order "Pour la Mérite," in company, it is said, with two of our own countrymen,—Longfellow and Bancroft.

The next meeting of the Middlesex (East) District Medical Society will be held with Dr. Winthrop Stevens at Stoneham, Wednesday evening, February 13th, at 7.30 o'clock.

A postponed paper by Dr. Jeffries.

The Actual Caution in Cancer, by Dr. W. S. Brown.

J. RICHMOND BARRE, *Secretary*.

**MIDDLESEX NORTH DISTRICT MEDICAL SOCIETY.**—At the quarterly meeting of the Middlesex North District Medical Society, an interesting essay on *The Metrical System in Prescriptions* was given by Dr. W. H. Lathrop of Tewksbury, who also gave illustrations on the blackboard.

The following in regard to the death of Dr. John C. Bartlett was adopted:—

This district society, in the death of Dr. John C. Bartlett, of Chelmsford, has lost an honored and respected member.

Above pretense and show, above the arts by which so many, half as well prepared, thrust themselves into notoriety, as a physician, he was esteemed by those who had an opportunity to learn his worth. He made no claim to extensive medical lore, he attempted no difficult surgical operation, but he had what all the schools of medicine cannot of themselves supply, an observing mind, a retentive memory, a good judgment and a high sense of responsibility. Some of these traits may have circumscribed his circle of practice, but not any deficiencies of mind and heart, of good medical education and attainments. His standard of professional honor was high, and he never descended to mean and petty tricks. For forty-six years he held the position of a medical man in a small country village, so different from that of a city practitioner. The division of labor and responsibility in large towns very naturally shuts the physician up to his chosen appropriate sphere; but the country doctor will find many opportunities and calls to do good, for which the faculty, as such, have no prescriptions. Happy is he who has the power and disposition to meet such calls, and no better evidence of Dr. Bartlett's claims upon the respect and confidence of the community in which he so long lived could be wished for and seen than was manifested by the large gathering at his funeral and grave.

JOHN O. GREEN, }  
CHAS. A. SAVORY, } *Committee.*  
LEVI HOWARD, }

LOWELL, January 17, 1878.

**BOOKS AND PAMPHLETS RECEIVED.**—Is the Human Eye changing its Form under the Influence of Modern Education? By E. G. Loring, M. D. New York.

Malaria and Struma in their Relation to the Etiology of Skin Diseases. By L. P. Yandell, M. D. Louisville, Ky. (Reprinted from the American Practitioner, January, 1878.)

Twenty-Fourth Report upon the Births, Marriages, and Deaths in the State of Rhode Island for the Year ending December 31, 1876. By Edwin M. Snow, M. D.

Fourteenth Annual Report of the Board of State Charities of Massachusetts, January, 1878.

Colds and Coughs: Their Causes and Consequences. Notes of Lectures delivered at Gresham College. By E. Symes Thompson, M. D., F. R. C. P. Philadelphia: Lindsay and Blakiston. 1878. (A. Williams & Co.)

Landmarks, Medical and Surgical. By Luther Holden, F. R. C. S. Second Edition. Philadelphia: Lindsay and Blakiston. 1878. (A. Williams & Co.)